

Title (en)  
POWER SAVING DRIVE CIRCUIT FOR TFEL DEVICES

Publication  
**EP 0420518 A3 19921028 (EN)**

Application  
**EP 90310346 A 19900921**

Priority  
US 41224189 A 19890925

Abstract (en)  
[origin: EP0420518A2] A power saving voltage drive circuit for a TFEL edge emitter device of the type having a plurality of pixels, with each pixel having a first terminal and all pixels on a device sharing a common second terminal, is comprised of a demultiplexing channel driver being selectively connected to the second terminal. A bidirectional switch selectively connects one of the first terminals to a source of voltage thereby enabling current to flow into and out of the pixel. A transformer has a primary winding connected between the first terminal and the bidirectional switch for enabling the pixel to charge to an operating voltage, and a secondary winding connected in series with a diode across the source voltage and ground for limiting the value of that operating voltage. The bidirectional switch is operated so that a substantial portion of the energy used to charge the pixel is returned to the source of voltage at the end of the pulse duration.

IPC 1-7  
**H05B 33/08**

IPC 8 full level  
**G09G 3/30** (2006.01); **H05B 44/00** (2022.01)

CPC (source: EP US)  
**G09G 3/30** (2013.01 - EP US); **H05B 44/00** (2022.01 - EP US); **G09G 2330/021** (2013.01 - EP US); **Y02B 20/30** (2013.01 - EP US)

Citation (search report)  
• [A] US 4707692 A 19871117 - HIGGINS MARVIN L [US], et al  
• [A] FR 2317722 A1 19770204 - SHARP KK [JP]  
• [XP] EP 0377955 A1 19900718 - UNITED TECHNOLOGIES CORP [US]  
• [A] SOVIET JOURNAL OF INSTRUMENTATION AND CONTROL no. 8, August 1968, OXFORD, GB pages 62 - 63; V.A. SKARZHEPA: 'Thyristor-based supply for digital indicators'

Cited by  
EP1351212A1; EP0817536A3; US5489839A; EP0699015A1; US5559402A; US5808420A; US7212194B2; WO9308670A1; WO9501627A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0420518 A2 19910403; EP 0420518 A3 19921028; EP 0420518 B1 19961204**; CA 2022971 A1 19910326; DE 69029312 D1 19970116; DE 69029312 T2 19970522; JP H03205785 A 19910909; US 5126727 A 19920630

DOCDB simple family (application)  
**EP 90310346 A 19900921**; CA 2022971 A 19900809; DE 69029312 T 19900921; JP 25164490 A 19900919; US 41224189 A 19890925